

Summary Discussion

Changes Made to the Water Quality Standards

July, 2003

Purpose Statement:

The purpose of this document is to:

- 1) Summarize and discuss the underlying basis for all of the changes that were made to the Water Quality Standards for Surface Waters of the State of Washington (Chapter 173-201A WAC), and
- 2) Describe how the final version differs from the previously proposed version that the U.S. Environmental Protection Agency (EPA) submitted comments on.

This summary document was developed to assist EPA in understanding how the changes to the state standards meet the federal Clean Water Act and the associated federal regulations. It should also assist with developing an understanding for how the changes support the goals and directives of the federal Endangered Species Act.

This submittal only changes criteria in the following areas. Ecology's view is that EPA's review and approval process, including consultation with federal fish agencies, will be limited to the standard changes we have made.

- **Temperature Criteria Revisions:**
 - The adoption of a 12°C temperature criterion to protect bull trout and Dolly Varden. The change was made to be consistent with EPA guidance, to better protect existing thermally optimal habitat, and to better protect waters used for spawning in the fall.
 - The designation of the char use to waters in Washington (found in Table 602 of the rule).
 - The establishment of new categories of aquatic life use protection designed for the eastside redband trout and for the state's native warm water aquatic species. These uses would be designated to waters during future rulemakings.
 - The establishment of two levels of protection for salmon and trout waters, consistent with the EPA recommendations. Core rearing and spawning waters receive a 16°C criterion and non-core rearing and spawning areas receive a 17.5°C criterion.
 - The inclusion of a directive to apply temperature criteria to protect spawning (9°C for char and 13°C for salmon and trout as consistent with the EPA recommendations) where it is determined the summer-time criteria by itself would not be likely to protect this sensitive life stage.

- The addition of language clarifying that irreversible human effects needs to be determined through the UAA process and approved by EPA.
- **Water Quality Antidegradation:**
 - Tier I protection that spells out clearly the need to protect all existing and designated uses, and to meet the established water quality criteria.
 - A Tier II process that applies to new and expanded activities applying for a permit or to new or reauthorized general permit and pollution control programs. The Tier II process requires that any applicable activities determined likely to cause a measurable degradation (e.g., a 0.3°C or greater increase at the edge of a mixing zone) to water quality parameters of better quality than the state criteria would be allowed only where doing so is found to be in the overriding public interest, and where less degrading alternatives are not readily available.
 - The inclusion of EPA's recommended Tier II ½ [referred to as Tier III (B)] in addition to a non-degradation Tier III [referred to as Tier III(A)] to provide more choices in the level of protection chosen by the public for our state's outstanding resource waters.
 - The inclusion of waters of ecological significance for consideration for Tier III status, as requested by EPA and as consistent with the federal regulations.
 - An expanded description of thermal refugia eligible for Tier III status, that would allow consideration of macro refugia, as requested by EPA and as consistent with the intent of protecting refugia.
- **Bacterial Criteria:**
 - The establishment of a secondary contact enterococci criteria (70/100 ml) to protect humans who boat, fish, and play along some of our more industrialized marine waters (i.e., existing Class B and C waters).
 - Clarification of the requirement to protect the state's shellfish resources through modifying riverine bacterial concentrations where necessary.
- **Restructuring the Water Quality Standards:**
 - The change to a new system for assigning beneficial uses to our waters. This new system will provide more flexibility to designate uses for protection that better match the capabilities and limitations of individual water bodies.
- **Compliance Schedules for Dams:**
 - Specific provisions were added that directly allow compliance schedules for bringing dams into compliance with the water quality standards. This new regulatory language requires a formal plan to evaluate all feasible and reasonable operational and structural changes that may enable the dam to meet water quality standards of provide for the maximum attainable level of water quality protection. It also directs how the UAA process is to be applied to dam operations. This is

done to ensure enough is known about the costs and feasibility of alternatives to go through an effective UAA review.

- **Ammonia Criteria**
 - Use our existing chronic ammonia criteria for waters with salmonids habitat and use the EPA 1999 update criteria for other situations.

Detailed overview of rule changes

Section 010 Introduction

010(1)

- Ecology added the phrase “antidegradation policy” to formally recognize all three elements of the water quality standards: uses, criteria, and antidegradation. This change will help amplify the central role that antidegradation is supposed to play in protecting water quality. See part 1a of the Responsiveness Summary for more discussion on this change.

010(4)

- Editorial changes were made for clarity.

Section 020 Definitions

“1-DMax”

- The timing in the definition was changed to 30 minutes or less to ensure that an interval is used that would not measurably under estimate the daily maximum temperature. This will enhance our ability to recognize waters that are not meeting the numeric criteria. While shorter intervals would be typically used (15 minutes) this directive seeks to set a minimum standard for data quality and recognizes that as the interval is reduced thermisters cannot be left in the streams for as long of a period of time before having to be replaced. Since staff time costs more than the thermisters in use today, minimizing the need for unnecessary staff visits will allow and encourage broader deployment of thermisters. Thus we can have a better network of sampling stations across the state without any measurable influence on the estimate of the average daily maximum temperatures. See part 7b of the Responsiveness Summary for more discussion on this change.

“90-DADMin”

- Since the dissolved oxygen proposal was not adopted, this definition was not needed, and therefore it was deleted. See part 19a of the Responsiveness Summary for more discussion on this change.

“AKART”

- The references to the stormwater management manuals in the definition were deleted. Local governments do not need to adopt Ecology’s stormwater manuals to be in compliance. They may develop their own manuals. Discussing all the issues surrounding the use of stormwater manuals in this definition would have created complexity and confusion without enhancing implementation or water quality protection. See part 70i of the Responsiveness Summary for more discussion on this change.

“Background”

- Editorial changes were made for consistency; and the last sentence was deleted because it was added by mistake to this definition during the last rule revision. The last sentence was only supposed to have been added to the definition of natural conditions. It is not very instructive in association with the definition of background conditions, and effectively made the definitions of background conditions and natural background conditions identical.

“Critical Condition”

- Editorial changes were made for consistency.

“Designated Uses”

- This definition was added to recognize the change in terminology from “characteristic uses” to “designated uses” and was written to be essentially the same as the federal definition in 40 CFR 131.3(f). See part 2c of the Responsiveness Summary for more discussion on this change.

“*E. coli*”

- Editorial changes were made for clarity.

“Existing uses”

- Editorial changes were made for clarity.
- Some concern has been expressed over the inclusion of the statement on not needing to fully protect non-native species. The purpose for this statement is to provide dominant protection for native species and support the natural restoration of our waters. In waters where introduced species occur, particularly where warm water species have been introduced into historic cold water fish habitat, the question comes up whether Ecology has a legal right to protect the natural cold water fish population when doing so will harm the “existing” warm water fish species. We find this argument contrary to the purpose of the Clean Water Act and believe it is important to have language in our standards that can eliminate this disruptive interpretation.

“Extraordinary primary contact”

- A definition for the new term “extraordinary primary contact” was added. This was to support providing a continued higher level of protection for headwaters and lakes which parallels the current regulation which used the Class AA and Class A levels of protection for primary contact. See “200(2) Recreation”

“Natural conditions”

- Editorial changes were made for clarity.

“New or expanded actions”

- The definition was changed to make it clear that newly regulated activities fall under the definition. Editorial changes were made for clarity. See part 2a of the Responsiveness Summary.

“Permit”

- Editorial changes were made for clarity.

“Primary contact recreation”

- Editorial changes (including the title) were made for clarity. See part 3b of the Responsiveness Summary.

“Secondary contact recreation”

- Editorial changes (including the title) were made for clarity. See part 3b of the Responsiveness Summary.

“Thermal refuge”

- The definition was deleted due to the lack of a clear scientific foundation for the specific temperature differential (2°C) selected to represent refugia. The term continues to be used in antidegradation Tier III to protect waters [Section 330(1)(e)], but as it is used it will be important to define on a site-specific basis the role and importance of individual refugia being recommended for protection. Artificially constricting the definition of what can be considered refugia seems unwarranted at this point in time. See part 2a of the Responsiveness Summary.

Section 200 Fresh water designated uses and criteria

200

- In the introduction, editorial changes were made for clarity.

200(1) Aquatic Life

- The language protecting non-key species was strengthened to make the requirement to protect all aquatic life more clear. It is important to make it clear that while the regulations identify key species and life stages as a basis for assigning the water quality criteria, that there is a mandate to protect all forms of aquatic life associated with the key species. It is also important to make it clear that in the uppermost portions of watersheds that constitute non-fish bearing waters, the criteria and standards are to be applied to protect aquatic macroinvertebrates and amphibians. See part 4b of the Responsiveness Summary for more discussion on this change.

200(1)(a)

- The description of char waters was clarified to make it more specific; it now reads “first year juveniles” instead of “first years of life.” This clarifies the intention to apply this use to waters used for initial rearing. The proposed language left in doubt whether it was to be applied also to waters where juveniles migrated in the second or third years of juvenile rearing, which was not the intent. This directive better matches up the use assignment to the scientific literature that was reviewed by Ecology. It also is generally consistent with the EPA guidance that separates out rearing from migrational areas. See part 5 of the Responsiveness Summary for more discussion on this change.
- All of the salmon and trout descriptions were changed to include the subcategories of “core” and “non-core” rearing. This approach was taken to create a parallel with our existing Class AA and Class A system and with the EPA regional temperature guidance. The existing Class AA waters (not otherwise designated for char protection) are now the core rearing waters, and the existing Class A waters are now the non-core rearing waters. Guidance will be needed for how to determine in the future what waters would be considered core versus non-core to deal with any future requests to change designations. See part 9c of the Responsiveness Summary.
- “Migration” was re-inserted into the use-descriptions to ensure that migration would be protected as a specific use. This was done in response to the concern that we would no longer protect migration using the narrative criteria. Since the spawning and/or rearing uses and criteria are applied to all our waters, and resident fish and non-fish species rearing is also part of the requirement for assigning the uses, there is no reason at present to have separate numeric criteria for migration. All waters will be assigned to one of the established spawning or rearing use categories and thus receive protection for conventional and toxic pollutants at levels that will also protect migration. See parts 24 and 64b of the Responsiveness Summary.
- The extraneous term “steelhead” was dropped since steelheads are a type of trout.
- Editorial changes (including numbering) were made for clarity.

200(1)(b) and other subsections titled “general criteria”

- Section 260 was changed, so all references to 260 in the entire chapter, including the reference in this subsection, were also changed.

200(1)(c) Temperature

A technical discussion document is available that describes the scientific basis for the temperature criteria. This document should be included in any review of the state's changes to its temperature criteria.

- Editorial changes (including numbering) were made for clarity.
- The char criterion was lowered from 13°C to 12°C. This responds to the considerable concerns over protecting high quality char habitat that were raised by federal and state fisheries agencies and matches the new EPA regional temperature guidance. This low temperature criterion is coupled with a newly added narrative criteria to ensure summer and early fall spawning stocks are appropriately protected. The narrative provision directs that in cases where applying the summer criteria of 12°C would not protect spawning that Ecology will apply 9°C at the time of spawning to ensure this sensitive life stage will be protected. The combined use of the colder summer criterion and the protection for early spawning stocks will better protect the existing areas of cold water in the areas designated for char protection. These protective criteria are further supplemented by the Tier II antidegradation requirements that direct that no source may cause more than a 0.3°C increase in existing water quality without investigating and adopting all feasible alternatives that eliminate or minimize the impact on temperature and water quality in general. It is also supplemented by the ability for cold water streams and cold water emergence areas that are critical for protecting char to be placed in Tier III non-degradation protection (discussed later in the antidegradation portion of this summary). See parts 8a-b of the Responsiveness Summary.
- The salmon and trout descriptions were changed to include the subcategories of “core” and “non-core” rearing. This approach was taken to create a parallel with our existing Class AA and Class A system and with the EPA regional temperature guidance. The existing Class AA waters (not otherwise designated for char protection) are now the core rearing waters, and the existing Class A waters are now the non-core rearing waters. Guidance will be needed for how to determine in the future what waters would be considered core versus non-core to deal with any future requests to change designations. See part 9c of the Responsiveness Summary.
- Core rearing and spawning waters for salmon and trout would receive a 16°C (7-DADMax). This is identical to the recommendations of EPA's temperature guidance. The 16°C criterion is applied to all the Class AA waters established in the existing water quality standards, and on average allows waters to be 1°C warmer than the old criteria. Ecology's technical evaluation found 16°C to be the central estimate of a temperature criterion that would represent the highest fully protective summer temperature for salmon and trout.
- A criterion of 17.5°C for non-core rearing, spawning, and migration was added. The criterion of 17.5°C was within the range for an upper end temperature criterion that will be fully protective of salmon and trout rearing. It is 0.5°C cooler than the EPA regional temperature criteria recommendation for non-core rearing, and is on average only about

0.5°C warmer than the existing water quality criteria applied to these waters. This criterion is being applied to all existing Class A fresh waters in the state (not otherwise protected for char). Guidance will be needed for how to determine in the future what waters would be considered core versus non-core; as no method was provided in the EPA regional temperature guidance. Such a determination is expected to be based on consideration of the frequency and times of spawning, the extent and quality of rearing and spawning habitat, and the salmonid population density and diversity of the water bodies. See part 9c of the Responsiveness Summary.

- A 17.5°C criterion value is also used to protect the salmon and trout rearing-only use established for the former Class B waters. This represents on average about a 2.5°C reduction in the allowable temperatures for these former Class B waters.
- An 18°C criterion value has been established to protect waters where the native salmonid population consists only of redband trout. This is a new use type that was not assigned to any state waters during this rule revision.
- A 20°C criterion value has been established to protect waters where that support only native warm water species. This is a new use type that was not assigned to any state waters during this rule revision.
- The beneficial use of “migration” was re-inserted. This was done in response to the concern by EPA and others that we would no longer protect migration using the narrative criteria. Since the spawning and/or rearing uses and criteria are applied to all our waters, and resident fish and non-fish species rearing is also part of the requirement for assigning the uses, there is no reason at present to have separate criteria for migration. All waters will be assigned to one of the established spawning or rearing use categories and thus receive protection for conventional and toxic pollutants at levels that will also protect migration. See part 64b of the Responsiveness Summary.
- Subsection (iv) was added to protect spawning and incubation of char, salmon, and trout when the summer temperature criteria established for a water body would not be protective. While the summer temperature criteria matches that of healthy streams, it is recognized that spawning occurs in the summer and early fall in some water bodies. In these water bodies, the use of the summer maximum criteria would not accomplish the intended purpose of fully protecting the beneficial uses. Therefore, Ecology added a narrative directive that would apply 9°C protect char and 13°C to salmonid spawning, where using the 16°C or 17.5°C summer criteria would not allow for these spawning temperatures to be attained when and where spawning occurs. These spawning values are identical to the recommendations in the EPA regional temperature guidance. In some water bodies, these narrative-directed spawning criteria would also create the need to establish more stringent temperature controls for mid-fall spawning stocks, thus the narrative will not solely be used to protect summer spawning stocks. Ecology is committed to a developing detailed guidance for effectively implementing the narrative spawning criteria, and will begin this work soon after the rulemaking is completed. The federal and state fisheries agencies and the tribes as well as other knowledgeable and

interested stakeholders will be invited to help develop this guidance. See parts 9a-c of the Responsiveness Summary.

- Subsection (i) was clarified, with the “human structural condition” clause moved to section 260. The new regulation makes it clear that the allowance provided for the effects caused by irreversible human structural changes to the water body is only to be authorized consistent with the procedures established in the federal regulations on conducting a Use Attainability Analysis. These determinations would need to meet the federal regulations, and formally adopted into the water quality standards with the associated EPA and ESA approval and concurrence. See part 12b of the Responsiveness Summary.
- Subsection (v) was added to address how the temperature criteria apply to lakes. This essentially continues the long-standing regulatory framework of directing that natural conditions be maintained in lakes. The only difference is that with the new standards a 0.3°C cumulative allowance for human warming is permitted. See part 3d of the Responsiveness Summary.
- The old subsection (v) was deleted because it was redundant with language in 260.
- Subsection (vii) on lethality and barriers to migration was modified to make it clear when it should be used. This language is intended to be used to assist in making determinations on what constitutes acceptable conditions when allowing mixing zones and short-term modifications to the standards for special projects. It is important to recognize that Ecology's mixing zone regulations will establish that the 16°C and 17.5°C criteria be met at the edge of the mixing zone. Mixing zones are very restrictive in size with no more than 25% of the flow, 25% of the stream width, and not extending more than about 300 feet downstream from the point of discharge. The regulations do allow for larger mixing zones in unique situations, but to date no extended mixing zones have been granted in the state. The portion of the regulation that potentially allows larger mixing zones [400(12) and (13)] also requires that beneficial water uses not be harmed [400(4)]. The purpose of the guidance values for short-term lethality to developing salmonids, preventing barriers to migration, and seven-day average lethality are intended to help guide good decision-making by any staff that are trying to use the narrative conditions for permitting these extended mixing zones [400(4)] as well as to support decisions to locate mixing zones with thermal components away from spawning areas. These narrative temperature provisions would similarly help guide controls for unique projects, not subject to standard discharge permits, such as those seeking approval under the short-term modification provisions of the regulation. Including this narrative guidance will help ensure that staff have a good source of information to assist in protecting aquatic resources. The 33°C criterion will be applied within the acute portion of the mixing zone. State regulations on mixing zones only allow 10% of the flow, and ten percent of the chronic mixing zone area for meeting acute criteria. The 33°C criteria further conditions this requirement such that even if an extended mixing zone were to be authorized, the area within which temperatures could exceed 33°C would be limited to the discharge plume travel time of 2 seconds. An incremental limit on warming to prevent thermal shock as exists in the EPA guidance, is not explicitly described in the standards; however, the limits that are

established in the state standards for incremental warming from any discharge accomplishes this protection. In general, sources would not be allowed to raise the relative ambient temperature by more than 1-1.5°C, with the exact amount dependent upon the ambient temperature at the time (see next bullet point).

- The existing controls on incremental warming were retained with only minor clarification and alterations. The existing standards limit the amount of warming from point and nonpoint sources in situations where the criteria are being met as well as when the standards cannot be met due to natural conditions of warming. The equation limiting the allowable increment of warming cold waters (colder than the numeric criteria of 16, or 17.5°C for example) was intended to be set at the same level that existed previously for the state's Class AA waters. Unfortunately, a typographic error occurred that inadvertently mixed the equations for Class AA and Class A waters. Ecology is investigating how to best address the correction of this issue at a future date. The equation adopted would allow as much as a 1.8°C increase in water temperature for point sources. This compares to the intended criteria that would have roughly allowed 1-1.5°C as an incremental change for point sources when the water is very cold and then diminishes as the ambient background temperature approaches the numeric criteria. The cumulative incremental allowance for nonpoint sources is 2.8°C for the water body. When conditions are determined to be naturally warmer than the numeric criteria, all sources combined are limited to a cumulative increase of 0.3°C above the estimated natural potential temperature. These provisions help maintain existing cold waters and prevent allowances for warming that may create thermal shock. Some confusion and concern was noted in public comments received on the incremental allowances. Many people were concerned the incremental allowances bypass antidegradation requirements. This is not the case and no basis for being able to argue that it could be the case is apparent to Ecology. Tier II of antidegradation clearly establishes that it is based on a change in the ambient water quality, it is not relational to the numeric criteria established for a water body. Tier II says that any new or expanding source of degradation that would cause more than a 0.3°C increase in temperature after initial dilution, would need to be found to be necessary and in the overriding public interest before being allowed. Thus, it is based on a change in ambient temperatures not on a change from, or a percentage of, a numeric criterion. The incremental allowances are applied as the limit to what can be authorized by Ecology for those proposed actions that pass a Tier II analysis as being necessary and in the overriding public interest.

The EPA regional guidance includes recommendations for some topics that were not included in the state regulations. These issues, which were discussed at length in Ecology's technical discussion documents, include: 1) Spring temperature criteria for steelhead smolts, and 2) A recommendation that core rearing criteria be used for char migration waters. Both of these issues involve the similar trait of not being well supported by science or existing patterns of uses and temperatures. In addition to our inability to defend the broad use of these recommendations if challenged, they would be very difficult and costly to implement, would be controversial, and would not add any predicable increase in protection for the aquatic resources of the state. More specifically:

1) The scientific research does not provide a defensible basis for defending the EPA position that a 7-DADMax temperature of 14°C forms a threshold for protecting outgoing smolts. Even Dr. Zaugg, a key authority on the topic, when brought into the technical workgroup meetings on the EPA regional temperature criteria to discuss his research and that of other researchers on this issue strongly questioned using the laboratory water temperatures as the basis for a water quality criterion. While a constant temperature of 12°C impaired smoltification in laboratory tanks, fish in the wild experience fluctuating temperatures and are influenced by other cues besides temperature. As noted by Dr. Zaugg, once underway, smolts appear uninfluenced by moderate temperatures. We can defend the position that maximum temperatures in tributaries need to be below 16°C in the spring to facilitate smolt development and out migration, but we have no technical basis to defend applying a maximum criteria of 14°C to the mouths of our rivers and streams throughout the out-migration period. Our concerns regarding this issue, and particularly the casual translation of a constant laboratory temperature to a maximum average maximum field temperature were not addressed in the development of the EPA guidance. Even if we were to assume that 14°C was an appropriate value, spring temperatures are under the primary control of natural processes of spring melt waters and climate rather than human alterations, and most outgoing smolts have already entered marine waters prior to our rivers exceeding a 7-DADMax of 14°C. Thus, there is a relatively low natural risk of exposure and for human influences on that risk. The effort necessary to apply a spring season criterion for our state would be problematic and costly. Temperature monitors left in our rivers during the spring flow period will commonly be washed out and it would be unsafe for staff to enter these high flow environments to remove monitors and download data. When setting TMDL limits using modeling, we would increase the resources and the time necessary to complete the modeling by including a spring season. The critical conditions and input factors for the model in the spring are very different than in the summer and fall. In many cases, adding a spring season criteria is expected to almost double the resources and time necessary to complete the TMDL, and will open additional areas of technical extrapolation for potential litigation and further delay implementation efforts. Against the backdrop of a weak scientific basis, few human control options that affect spring temperatures, significant increases in monitoring and analytical costs, and increased logistic and modeling problems; we see very little evidence that a 14°C criterion would be a beneficial addition to the state's standards.

2) The recommendation to maintain summer maximum temperatures below 16°C in waters used for char migration is difficult to defend. Were it to be applied at the locations and times that char migration typically occur, it would be more defensible. Ecology, however, finds no solid technical basis for defending the position that a river's summer maximum temperature should be limited to 16°C if bull trout use it for a migration corridor in the non-summer season. Even under natural conditions, char move down to main stem rivers to escape harsh winter conditions in the headwaters of many streams and move back to the headwaters in the spring. In addition, many rivers that harbor healthy char populations such as the Ahtanum River East of Yakima are used as migration corridors but commonly reach summer maximum temperatures of 27-28°C. Assigning a 16°C criterion to these rivers not only ignores the way the char use these rivers but would be detrimentally viewed as irrational by the stakeholders Ecology must work with to encourage voluntary action to enact nonpoint source control programs.

Ecology believes EPA has over-applied the precautionary principle in its recommendations for smolt and char migration protections. After years of discussing our concerns with EPA in the

development of their regional temperature criteria, we remain unable to find a sound basis to defend the use of these recommendations in our state standards. If more new technical information is developed that can support such criteria, Ecology would be willing to reconsider the need for such criteria.

200(1)(d) Dissolved Oxygen

- All of the proposed D.O. numeric criteria were dropped. Ecology will continue to use the existing D.O. criteria (6.5, 8.0, and 9.5 mg/L), with the existing metric (1-day minimum). The terminology for the use-categories has been changed, however, to match the new use-based system. This terminology change affects both the table and other language in the subsection. See parts 19a-b of the Responsiveness Summary.
- All of the salmon and trout descriptions were changed to include the subcategories of “core” and “non-core” rearing. The waters that were previously assigned to Class AA for spawning and rearing are now assigned to the core spawning and rearing use, and the waters previously assigned to Class A for spawning and rearing are now assigned to the non-core spawning and rearing. Guidance will be needed in the future to guide any changes in use assignment. Class B is now the rearing-only use type. See parts 19a-b of the Responsiveness Summary.
- The beneficial use of “migration” was re-inserted to make it clear that this use will be protected in its own right. This was done in response to the concern that we would no longer protect migration using the narrative criteria. Since the spawning and/or rearing uses and criteria are applied to all our waters, and resident fish and non-fish species rearing is also part of the requirement for assigning the uses, there is no reason at present to have separate criteria for migration. All waters will be assigned to one of the established spawning or rearing use categories and thus receive protection for conventional and toxic pollutants at levels that will also protect migration. See part 64b of the Responsiveness Summary.
- Subsection (i) was clarified, with the “human structural condition” aspect moved to section 260. We have clarified that this clause is to be used as part of a UAA evaluation and requires formal public involvement, rulemaking, and approval by EPA under the CWA and the ESA. See part 12b of the Responsiveness Summary.
- Subsection (ii) was added to address how the dissolved oxygen criteria apply to lakes. Continuing with the approach in the existing standards, lakes are to be maintained at their natural oxygen levels – except that a cumulative 0.2 mg/l depression from all combined human activities has been added. This approach matches better the complex patterns of oxygen and temperature that occur in lakes. See part 3d of the Responsiveness Summary.
- The old subsection (v) was deleted because it was redundant with language in 260.

200(1)(e) Turbidity

- No changes in the criteria were made during this rulemaking, but all of the salmon and trout descriptions were changed to include the subcategories of “core” and “non-core”

rearing. These terminology changes were made in the effort to standardize to the new use-based structure for assigning beneficial uses and to be compatible with the recommendations of EPA's new temperature guidance. The waters that were previously assigned to Class AA for spawning and rearing are now assigned to the core spawning and rearing use, and the waters previously assigned to Class A for spawning and rearing are now assigned to the non-core spawning and rearing. Guidance will be needed in the future to guide any changes in use assignment. The actual numeric criteria were not changed. Ecology corrected an error in the redband trout criteria that existed in the proposed changes. The level of protection for redband trout is now consistent with that for the rainbow trout that occur on the Westside of the state. See part 21 of the Responsiveness Summary.

- The beneficial use of “migration” was re-inserted. We have no separate criteria for migration, and do not recognize any water bodies as only protecting migration. Thus rearing and spawning uses and criteria are used universally in salmonid waters in Washington. See part 64b of the Responsiveness Summary.
- The numbering was changed for clarity.

200(1)(f) Total Dissolved Gas

- No changes were made to the state-wide criteria during this rulemaking. All of the salmon and trout descriptions were changed to include the subcategories of “core” and “non-core” rearing (See previous discussion on this issue with temperature and dissolved oxygen). The actual numeric criteria were not changed. See part 22 of the Responsiveness Summary.
- The beneficial use of “migration” was re-inserted (See previous discussion on this issue with temperature and dissolved oxygen). See part 64b of the Responsiveness Summary.
- Minor changes were made to the language on monitoring for compliance in the Columbia and Snake Rivers as part of the gas abatement plan established for those rivers. These changes include alterations to the averaging period that would, however, have the effect of slightly changing the potential stringency of the criteria. These changes were made to more accurately match the averaging period with the exposure scenario of concern. This is consistent with the Biological Opinion for total dissolved gas controls on the Columbia and Snake Rivers.
- Subsections (i) and (ii) were changed to clarify which criteria applied in which situations.

EPA expressed some concern over how the total dissolved gas criteria would be used. We have tried to make it clear that the 12 sample averaging is only for the projects on the Snake and Columbia Rivers that have a formal gas abatement plan. The criteria are not applied to other areas of the state. These facilities collect sufficient samples to conduct the necessary averaging. It is important to note that the gas abatement and fish passage plan is developed in concert with and supported by the federal fish agencies. Ecology has relied on the advice of the federal agencies in establishing the alternative gas criteria. The criteria used in the state standards were those recommended in the Biological Opinion for improving fish passage that was prepared by

the federal fish agencies. The changes made to the standards are supporting the plan and the requests of those agencies to improve the overall survival of fish passing the dams. If any greater impacts to fish from total gas were found, the plan would be revised and the standards adjusted accordingly. A package of supporting information on the TDG regulation will be provided to EPA as Enclosure 5 of this submittal.

200(1)(g) pH

- No changes were made to the pH criteria during this rulemaking. All of the salmon and trout descriptions were changed to include the subcategories of “core” and “non-core” rearing (see previous discussion on this issue with temperature and dissolved oxygen). The actual numeric criteria were not changed. See part 23 of the Responsiveness Summary.
- The beneficial use of “migration” was re-inserted (See previous discussion on this issue with temperature and dissolved oxygen). See part 64b of the Responsiveness Summary.

200(2) Recreation

- Ecology deleted the proposed title of “water contact” and replaced it with the existing title “recreational” in response to public concerns that recreation was being eliminated as a protected use. See part 3b of the Responsiveness Summary.
- Ecology dropped the proposal to switch to *E. coli*. Ecology is re-inserting the existing fecal coliform criteria (50, 100, and 200 colonies/100mL). The categories have been changed to match the new use-based system (for example, the new “extraordinary primary contact recreation” category matches the old “Class AA”). This change affects both the table and other language in the subsection. Since *E. coli* is a subset of fecal coliform bacteria any fecal coliform criteria lower than the federal guidance of 126/100ml of *E. coli* is more protective of public health. Ecology will retain the general application of 50/100ml fecal coliform to protect headwaters for primary contact and 100/100ml fecal coliform to protect all other freshwaters for primary contact. By using the broader indicator of fecal coliform and setting the state criteria at values lower than the EPA *E. coli* recommendation, Ecology is more stringent than the federal guidance and will better protect public health. Similarly, the secondary contact criteria of 200/100ml fecal coliform used in Washington’s standards is well under the national recommendation for secondary contact protection (5 times the primary contact value). The lower costs of conducting fecal coliform testing, its widespread use in monitoring and compliance programs, and its familiarity and acceptance to stakeholders prompted the decision to keep this indicator in fresh waters. Additionally, under state law the agency is prohibited from adopting regulatory changes where the costs exceed the benefits. The increased laboratory costs and duplicative monitoring in some waters combined with the increased number of estimated illnesses in our citizens was not counterbalanced by any foreseeable decreased costs of compliance. See parts 25a-d of the Responsiveness Summary.
- Proposed subsections (i)-(iii) were combined for clarity.

200(3) Water supply uses

- All proposed numeric criteria for agricultural supply water were dropped. The use has been retained but will be used in association with narrative criteria statements on protecting existing and designated uses. This is similar to how other water supply uses (i.e., domestic, industrial, stock watering) are protected under the state standards. See part 27a of the Responsiveness Summary.

200(4) Miscellaneous Uses

- The uses of boating and aesthetics, which are in the existing standards, were reinserted. This was done to ensure that these uses will be protected in their own rights. In the proposal, boating was a part of the description of water contact use for the purpose of applying bacterial criteria, and aesthetics was used only as a criteria instead of a stand-alone use. See part 3b of the Responsiveness Summary.

Section 210 Marine water designated uses and criteria

210(1) Aquatic life uses

- No changes were made to the aquatic life use assignments or criteria for marine waters.
- The language protecting non-named species was strengthened to make the requirements clear. This is particularly important in order to clarify that the standards are intended to protect non-fish species as well as fish species. See part 4b of the Responsiveness Summary.
- The category descriptions were changed to: (1) match the existing Class-based descriptions, and (2) establish harvesting as a separately listed use. See parts 29 and 31 of the Responsiveness Summary.
- In the proposal, Ecology simply referenced the notes for freshwater criteria, such as for temperature and oxygen monitoring, stating they applied “where applicable.” In the final version, Ecology included the notes that were applicable to marine waters directly under the marine criteria sections. See parts 29d and 30 of the Responsiveness Summary.
- The title in the D.O. table (Table 210(1)(d)) was changed for clarity.

210(2) Shellfish Harvesting

- No changes were made to the use designations or criterion for protecting shellfish harvesting.
- A new subsection, 210(2) was established to contain the shellfish harvesting criteria. The new subsection was added to make the rule easier to navigate. The language in the proposal in subsection 210 and 210(1)(g) were transferred to this new subsection. The numeric criteria (14 fecal coliform colonies/100mL) are unchanged. Areas used for

shellfish are simply called “Shellfish Harvesting”. See parts 31 and 32 of the Responsiveness Summary.

- Proposed 210(1)(g)(i) was deleted since it is no longer necessary due to changes in the contact recreation subsection. See part 31 of the Responsiveness Summary.
- In the proposal, Ecology simply referenced the notes in the fresh water section, stating they applied “where applicable.” In the final version, Ecology actually included the notes that were applicable to shellfish harvesting in marine waters. See parts 29d and 30 of the Responsiveness Summary.

210(3) Recreation

- Ecology deleted the proposed title of “water contact” and replaced it with the existing title “recreational.” See part 3b of the Responsiveness Summary.
- Since all primary contact recreation waters are currently shellfish harvesting waters and the shellfish harvesting criteria also protects primary contact recreation, the bacteria indicator for primary contact was changed to 14 fecal coliform colonies/100mL. This matches the shellfish harvesting criteria, and eliminates an area of conflicting criteria. This also makes proposed subsection 210(3)(b)(i) unnecessary, so the subsection was deleted. In an effort to determine whether the continued use of fecal coliform would be protective of recreation in marine waters, Ecology’s analysis of paired indicator data suggest that a fecal coliform concentration of 14/100ml can be relied on to meet the national criteria recommendation of a geometric mean enterococci concentration of 35/100ml. Ecology took 186 samples from 37 sample sites across Puget Sound over a one year period and found that in no case was the enterococci concentration above 35/100 ml without the fecal coliform criteria of 14/100 ml also being exceeded. We also examined the data from other cooperators, and out of 1189 paired samples found that 99% of the individual sample pairs that had fecal coliform concentrations of 14/100ml or less also had enterococci of 35/100 ml or less. This analyses is based on comparing individual samples and thus is very conservative given the criteria are actually based upon geometric means. In a comment letter on the proposal, EPA noted a 1985 study by Vasconcelos and Anthony in support of EPA's concerns that using fecal coliform at 14/100ml would miss some enterococci exceedences of health significance. It is worthy of noting that for the two marine beaches sampled, neither had geometric mean concentrations of enterococci that violated the 35/100ml EPA recommendation and neither had single sample values that violated the 104/100ml recommendation. One of these beaches would have, however, been in violation of the single sample limit for fecal coliform (41/100ml) that is in the current and revised state standards – thus the state fecal coliform standards are more stringent even in this data set. While Ecology cannot say that there is no possibility that a geometric mean of 35/100ml would ever be exceeded while a geometric mean of 14/100 ml would be met, the data strongly suggests this is very unlikely to occur, and if it occurs at all it does so at an insignificant frequency. State law does not permit the agency to adopt changes to regulations where the benefits do not exceed the costs, and directs the state to select the least burdensome approach to accomplishing its goals. Thus, the significant added costs of monitoring and analyzing for multiple indicators without any added benefits in health protection cannot be justified by Ecology. See parts 32a-b of the Responsiveness Summary.

- Proposed subsection 210(3)(b)(ii) deals with shellfish harvesting, so it was moved to that section.
- In the proposal, Ecology simply referenced the notes in the fresh water section, stating they applied “where applicable.” In the final version, Ecology actually included the notes that were applicable to recreational protection in marine waters. See parts 29d and 30 of the Responsiveness Summary.

210(4) Miscellaneous Uses

- The uses of boating and aesthetics, which are in the existing standards, were reinserted. This was done to ensure that these uses will be protected in their own rights. In the proposal, boating was just a part of the description of water contact use for the purpose of applying bacterial criteria, and aesthetics was used only as a criteria instead of a stand-alone use. See part 3b of the Responsiveness Summary.

Section 230 Establishing lake nutrient criteria

230(6)

- No changes were made to the lake nutrient criteria section other than changing the reference in 230(6) due to changes that were made in section 260.

Section 240 Toxic substances

240(3) (Notes to Table)

- The phrase “existing or designated” was added to “uses” to clarify the types of uses the criteria were intended to protect. See part 35a of the Responsiveness Summary.
- Ammonia criteria and related equations in 240(3)(f) and (g) were revised. EPA’s recommended acute criteria for salmonid waters was adopted as were their revised acute and chronic criteria for non-salmonid waters. Ecology retained its existing chronic criteria for salmonid waters due to concerns the EPA recommended chronic criteria would not protect young salmonids.

Section 250 Radioactive substances

- No changes were made to section 250.

Section 260 Natural Conditions and other water quality criteria and applications

260

- Subsection 260(1) and (2) were switched to move natural conditions to the top of the section.

260(1)

- The natural conditions clause in 260(1)(a) was strengthened to make the use of natural conditions more automatic. This was done to match existing rule language and responds to concerns raised by EPA in their comment letter on the proposed standards. See part 38b of the Responsiveness Summary.
- The human structural changes clause in 260(1)(b) was broken out for clarity. See part 38e of the Responsiveness Summary.

260(2)

- Subsection 260(2)(c) on nonpoint sources was deleted since the existing implementation section of the regulation already discusses the expectations for nonpoint sources in greater detail. Also, the language was confusing since it was presented as if it were a criterion. See part 37a of the Responsiveness Summary.

260(3)

- A sentence was added to subsection 260(3)(b) that protects non-fish aquatic species in headwater areas. This language makes it clear that while the criteria focus on application on the basis of key species that represent aquatic community types, the water quality standards are to be implemented in a manner that protects all aquatic species. See part 4b of the Responsiveness Summary.

Section 300 Antidegradation – Description

300

- The title was changed to make it more accurate.

300(1)

- The phrase “The antidegradation policy is guided by...” was moved up to subsection 300(1). This changed the numbering throughout subsection 300.\

300(2)

- The descriptions of the three tiers in 300(2)(e) were expanded to specifically mention which sources of pollution were included. Ecology wants to make sure that it is clear that we had only limited application of Tier II to activities under the direct control or oversight of Ecology and intended to meet the federal CWA – but not the application of Tier I or Tier III. All sources must meet water quality criteria, protect designated uses, and not degrade Tier III waters. See part 42c of the Responsiveness Summary.

300(3)

- This subsection was added to address major habitat restoration projects. Arguments had been made that the water quality standards regulation as it existed previously, would not allow for the removal of dams or other major structural restoration efforts. This argument focused on the concept that the dam-created uses must be fully protected as existing uses even if doing so prevented the restoration of naturally occurring beneficial water uses. This was viewed as an unacceptable use of the water quality standards' directive to protect existing uses, and the changes made to the regulation have been designed to allow structural restoration to occur where there are greater ecological benefits. This provision provides important clarification on how to deal with competing in-stream uses when attempting to implement the restoration goals of the federal Clean Water Act. See part 42g of the Responsiveness Summary.

Section 310 Tier I

310(1)

- This subsection was expanded to make the requirements of Tier I clearer. See parts 43a-f of the Responsiveness Summary.

310(2)

- The phrase "For degraded waters . . ." was not clear, so it was replaced with "For waters that do not meet assigned criteria, or protect existing or designated uses. . ." . See part 43b of the Responsiveness Summary.

310(3)

- The subsection was expanded to clarify the role of natural conditions. The final rule explicitly states that under certain conditions, where the natural conditions exceed the numeric water quality criteria those natural conditions constitute the water quality criteria. See part 43f of the Responsiveness Summary.

Section 320 Tier II

320

- The entire section was reorganized to increase readability. Many pieces were edited for clarification and moved to new locations. See parts 44-49 of the Responsiveness Summary.

320(2)

- The proposed rule was silent on the need for public involvement, so clarification that the antidegradation discussions need to be incorporated in the public involvement for projects was added. This was requested by EPA and is consistent with Ecology's intentions for the Tier II review. See part 44 of the Responsiveness Summary.

320(4)

- Language was added stating that the overriding public benefit analysis is related to the lowering of water quality, not the company or action as a whole. Thus, rather than asking if Company X is in the overriding public interest, Tier II asks whether the proposed pollution associated with some new or expanded action by Company X is in the overriding public interest. See part 44a of the Responsiveness Summary.
- Additional examples for the “overriding public interest” analysis were included in 320(4)(a)(v)-(vii). These included the benefits of maintaining clean water as recommended by EPA and other stakeholders. See part 47 of the Responsiveness Summary.

320(6)

- Subsection 320(6)(b) was simplified to one sentence to more accurately state the process for general permits or control programs. See part 48 of the Responsiveness Summary.
- Subsection 320(6)(c)(ii) was modified to match the period of permit re-issuance, which may not be exactly five years. See part 48 of the Responsiveness Summary.

320(7)

- This new subsection was added to reinforce the existing requirement that Tier I must still be met. See part 44g of the Responsiveness Summary.

EPA Issues to be Dealt with Through Supplementary Guidance: One of the Tier II concerns raised by EPA in their comment letter to the state was the need to consider not only the ambient water quality, but what that quality would be if all of the permittees were discharging at their permitted loads. We agree this is an important issue, but view it as a Tier I issue (i.e., is there really assimilative capacity enough to allow the discharge without violating criteria?) that needs to be dealt with through agency guidance.

Another issue raised by EPA was concern that the use of a measurable change threshold to trigger Tier II might result in double counting (“an allowance for measurement error plus an allowance for degradation”). Ecology is unable understand why EPA believes the adopted language allows for this potential effect. Since it is not intended, we will be supportive of making any necessary clarifications in antidegradation guidance once the concern is more clearly understood.

A third issue raised by EPA is the concern that the measurable effect trigger not be combined with extended mixing zones. But as noted by EPA, the purpose for including the reference to the standard size limit was to prevent the use of an extended mixing zone from freeing up a discharger from having to go through a Tier II analysis. We will explicitly make this purpose clear in the supplementary antidegradation guidance even though the regulatory language should be sufficient as written. EPA also requested that language associated with an earlier draft of the antidegradation plan for general permits be reinstated. This language included reminders such as that Tier I needed to be met. This language was dropped because it was made unnecessarily redundant by the requirement that the general permit programs “come into full compliance with this chapter.” As to public notice, entities must apply for coverage

under the general permits and Ecology requires that they public notice their intention to be covered by the general permit.

EPA requested the state explain how it will track cumulative non-measurable actions under antidegradation. Ecology does not plan on creating a process to track de minimis changes in watersheds or to set any threshold limits lower than the water quality criteria. Ecology does not agree that a de minimis source should go through the Tier II analysis if the standards are being met. Ecology further believes that conducting baseline trend analyses to track relative contribution rates would be technically too difficult and would expend resources that would otherwise go to preventing the measurable deterioration of water quality. Ecology set low threshold triggers for Tier II analysis and plans to apply them broadly to all water bodies where the quality of the water is better than established water quality criteria. This is more protective of water quality than using a percent of assimilative capacity and Tier II designational approach, and it does not expend limited resources on technical analyses that return very little environmental benefits. Ecology believes that conducting a focused and effective Tier II analysis on actions that have more than a de minimis impact on water quality better serves the intent of the federal antidegradation program. Engaging the public to discuss the modeled effects of a complex network of de minimis activities after they are already in place would only be confusing and unproductive, thus we cannot support EPA's suggestion to track non-measurable effects. Additionally, most of the de minimis activities would still be required to go through public reviews, even though Tier II antidegradation is not invoked.

Section 330 Tier III

330

- The EPA concept of Tier II ½ was added to the rule; however, instead of using the term II ½ we are calling it Tier III (B). An introduction was added to this section to introduce the concept of Tier III(A) and (B). See part 49b of the Responsiveness Summary.

330(1)

- Subsection 330(1)(d) on ecologically significant waters was added to match federal language. See parts 49b and 50d of the Responsiveness Summary.
- Subsection 330(1)(e) on thermal refuges was simplified for clarity and to ensure that refugia that is larger than small seep areas can be considered. Since many of these refugia are believed to be in the lower reaches of major rivers, requiring non-degradation status for all human pollutants would greatly discourage the nomination and adoption of these areas for Tier III protection. This is because it would essentially mean that no increases in human industry would be allowed in the entire upper watershed which may contribute even de minimis amounts of any pollutant regardless of the risk it would pose to the fish and aquatic life using the coldwater refugia downstream. Therefore the state has limited Tier III for these waters to only pollutants that effect temperature and dissolved oxygen. This should improve the chance that refugia occurring in the lower

reaches of watersheds may be included in Tier III for protection. This See part 50e of the Responsiveness Summary.

330(4)

- The subsection was changed to make it explicit that Tier III includes “all degradation.” See part 42c of the Responsiveness Summary.
- Subsection 330(4)(d) on atmospheric deposition was simplified to recognize that controlling the diffuse regional and even global sources of air pollutants is not possible for the state’s water quality antidegradation program. See part 53 of the Responsiveness Summary.

330(5)

- Language was added to 330(5) to explain the addition of Tier III(A) and (B). Tier III(B) is similar to EPA’s suggested Tier II½. Only cumulative non-measurable degradation from well controlled sources can be allowed in Tier III(B). The existence of this more lenient extra tier provides a greater chance that communities and stakeholders will support placing some of the states most outstanding resource waters into this high category of protection. This is because the measurable allowance clause still allows for development to occur that will be well controlled using state of the art techniques for pollution control and treatment. As can be observed nationally, the absolute non-degradation provisions in the EPA version of Tier III discourages the application of Tier III to waters where human activities exist or could exist in the foreseeable future. Application is largely to waters already permanently protected by wilderness status and other state and federal programs. By including a tier that sets a high, but still pragmatic standard for water quality protection, we believe that more waters will ultimately be protected that would benefit from the designation. See part 49b of the Responsiveness Summary.

Section 400 Mixing zones

No changes were made to section 400. See part 55 of the Responsiveness Summary.

Section 410 Short-term modifications

410

- Consistent with the recommendations of EPA, the introduction phrase was changed to re-insert existing language (in a modified form) concerning the time limits of short-term modifications. This helps the reader understand what is meant by “short-term.” It is important to separate the time period that the permission is granted to the applicant to conduct an activity (the construction window for example) from the amount of time water quality criteria may be exceeded. While the window for the activity may be a year, or longer if a 5-year management plan is approved, the actual periods within that year that numeric criteria may be exceeded are restricted to hours or days. As an example, a

management plan for removing culverts blocking fish passage. Such a plan would explain how and when these blockages will be removed over the years that the plan is in effect, but the BMPs and control restrictions established in the plan would be such that the amount of time at each site that water quality criteria may be exceeded and the extent that the criteria would be exceeded would be greatly limited. See part 56a of the Responsiveness Summary.

- EPA has expressed some concern over the allowance for longer term exceedences of water quality criteria for restoration projects. The provisions require that there be greater benefits to the ecology than impacts, and this allowance is critical to meet the CWA goals of restoring the ecological integrity of the state's waters. Additionally, we do not see that the variance provisions are suited to the issue of restoration, and force fitting federal regulations that were designed for other situations will risk costly legal challenge. A very direct allowance for supporting restoration projects is vital to support restoring watersheds to their natural health and thus is consistent with the federal Clean Water Act. That said, however, Ecology recognizes that the short-term modification provisions are not the appropriate in many situations where pollution and habitat degradation are being remedied (e.g., such as where the effects of mine waste are being remedied), and in these other situations a variance is indeed the appropriate tool to use.

410(1)

- Changes were made for clarity, particularly with respect to the terminology around "uses." The subsection addressing the fact that other rules still have to be met was moved. See part 56a of the Responsiveness Summary.

410(3)

- Editorial changes were made for clarity, particularly with respect to the terminology around "uses." See part 56a of the Responsiveness Summary.

410(4)

- The subsection addressing the fact that other rules still have to be met was moved. The numbering of the section was changed.

410(5)

- Editorial changes were made for clarity.

Section 420 Variance

420

- The structure and numbering of the section was modified for clarity and readability

420(1)

- The requirements in 40 CFR 131.10(h) were not reference in the proposal. The final rule now references those requirements. See part 57 of the Responsiveness Summary.

420(4)

- Subsection 420(4) was added so the reader is aware of the requirement for EPA to approve variances. See part 57 of the Responsiveness Summary.

Section 430 Site Specific Criteria**430**

- The structure and numbering of the section was modified for clarity and readability. See part 58 of the Responsiveness Summary.

430(1)

- A new introduction to site specific criteria was added to 430(1). See part 58 of the Responsiveness Summary.
- The requirements in 40 CFR 131.11 were not reference in the proposal. The final now references those requirements. See part 58 of the Responsiveness Summary.

430(4)

- Subsection 430(4) was added so the reader is aware of the requirement for EPA to approve site specific criteria. See part 58 of the Responsiveness Summary.

Section 440 Use attainability analysis**440**

- The structure and numbering of the section was modified for clarity and readability. See part 59a of the Responsiveness Summary.
- The differences between a “request to conduct a UAA” and the actual UAA was clarified. See part 59a of the Responsiveness Summary.

440(9)

- Subsection 440(9) was added so the reader is aware of the requirement for EPA to approve UAAs. See part 59a of the Responsiveness Summary.

Section 450 Water quality offsets**450(2)**

- Extraneous language in 450(2)(a) was deleted. See part 60 of the Responsiveness Summary.

EPA recommended that language be added to require that offsets remain in place. Such a requirement (“secured using binding legal instruments . . . for the life of the project that is being offset”) was in the proposal and remains in the final version adopted. Further, EPA expressed concern that water not be degraded between the point where the offset is needed and the point where the offset activity occurs. This protection is built into the rule language (e.g., “reduce the levels of pollution for the purpose of creating sufficient assimilative capacity” . . . “reduce the pollution levels of a water body so that a proponent’s actions do not cause or contribute to a violation of this chapter and so that they result in a net environmental benefit” . . . “account for the attenuation of the benefits of pollution controls as the water moves to the location where the offset is needed”).

Section 500 Achievement considerations

- No changes were made to section 500.

Section 510 Means of implementation

510(1)

- Editorial changes were made for clarity, including the subsection dealing with discharges violating standards.

510(5)

- Subsection (a) was modified so it would not be construed that new dams might not have to meet water quality standards.
- Editorial changes were made for clarity.
- Additional examples were added to (g)(ii) so it would not appear that the water quality standards were limiting flexibility. See parts 61-62 of the Responsiveness Summary.

Section 520 Monitoring and compliance

- No changes were made to section 520. See part 63 of the Responsiveness Summary.

Section 530 Enforcement

- No changes were made to section 530.

Section 600 Use designations – fresh waters

600

- Structural changes were made to section 600. See part 64 of the Responsiveness Summary.
- The old sections 600(1)-(4) were deleted. The information is now in 600(1) and Table 602.

600(1)

- This new subsection was added to assign uses to waters. Of particular note are the categories of core rearing, non-core rearing, and extraordinary primary contact recreation. These three use categories were not in the proposal, and they are assigned to only certain water bodies. These three use categories were developed to accommodate criteria in the existing standards that are not being changed. The system for assigning waters matches the class system in the existing standards. See changes in section 200 for more details.

600(2)

- This subsection was added to reinforce that Washington's water quality standards do not apply on Indian reservations. See part 65b of the Responsiveness Summary.

Table 600

- Table 600 (the key to Table 602) was modified to incorporate the changes made in sections 200 and 602.

Section 602 Table 602 – Use designations for fresh waters by water resource inventory area (WRIA)

602(1)

- The introduction in 602(1) was changed to explain the modified Table 602.
- The unnecessary reference to UAAs was deleted.

602(2)

- The subsection was added so it was clear to the reader that Table 602 was necessary, despite the fact that it is called an "illustration."

Table 602

- The format of the table was completely changed. Each use is now listed across the top of each page. The changes in the categories match the changes made in section 200. See part 65b of the Responsiveness Summary.
- Various geographic errors in the table were corrected. See part 65b of the Responsiveness Summary.

- Certain water bodies were split up into multiple descriptions to accommodate the changes in section 200 (such as core versus non-core rearing, and extraordinary primary contact and primary contact recreation).
- The phrase “1-DMax” was added to the special temperature conditions to clarify the metric. See part 65c of the Responsiveness Summary.
- All of the water bodies listed in the existing standards are now included in Table 602 to accommodate the changes in section 200.

Section 610 Use designations – Marine waters.

610

- Structural changes were made to section 610.
- The old sections 610(1)-(3) were deleted. The introduction now correctly states that all marine waters are listed in Table 612.

Table 610

- Table 610 (the key to Table 612) was modified to incorporate the changes made in sections 210 and 612.

Section 612 Table 612 – Use designations for marine waters

612(1)

- The introduction in 612(1) was changed to explain the modified Table 612.
- The unnecessary reference to UAAs was deleted.

612(2)

- The subsection was added so it was clear to the reader that Table 612 was necessary, despite the fact that it is called an “illustration.”

Table 612

- The format of the table was completely changed. Each use is now listed across the top of each page. The changes in the categories match the changes made in section 210.